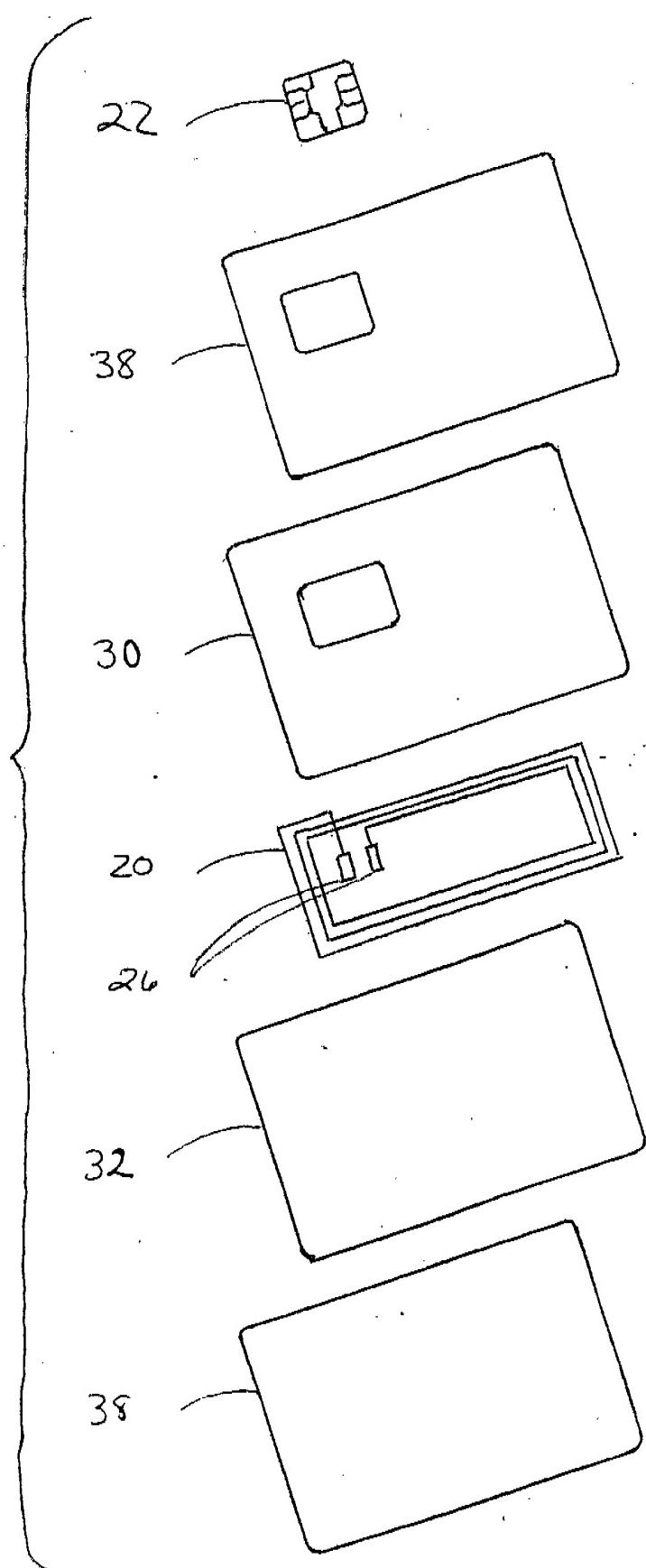


Fig.





**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Leighton, Keith R. / Examiner:

Serial No: 08/918,582 / Art Unit:

Filed: 08/17/97 Date: October 17, 1997

For: HOT LAMINATION PROCESS FOR THE MANUFACTURE  
COMBINATION CONTACT/CONTACTLESS SMART CARD AND  
PRODUCT RESULTING THEREFROM

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**INFORMATION DISCLOSURE STATEMENT**  
**Under 37 CFR § 1.97**

This Information Disclosure Statement is filed within three months after the filing date of this application and is therefore timely. 37 CFR §1.97(b).

The filing of this Information Disclosure Statement shall not be construed as a representation that a search has been made (37 CFR §1.56(g)), an admission that the information cited is, or is considered to be, material to patentability or that no other material information exists.

The filing of this Information Disclosure Statement shall not be construed as an admission against interest in any manner. Notice of January 9, 1992, 1135 O.G. 13, at 25.

This Information Disclosure Statement is made to comply with the duty of candor imposed on all individuals associated with the filing or prosecution of this application, as defined by 37 CFR §1.56(c).

A list of the patents and other cited references cited by the applicant are enclosed on two sheets of Form PTO-1449 which are attached and made a part hereof. Copies of the references are enclosed herein. The relevance of each cited reference is thought to have



2

been sufficiently discussed in the prosecution of the parent applications and, therefore, has not been recited herein.

This Information Disclosure Statement is based on information contained in the undersigned attorney file as of the date of this statement and is inclusive of the best information known to the undersigned at that date.

The Examiner is kindly requested to consider the Information Disclosure Statement in addition to any references identified by the Examiner as a result of his independent search and examination.

Respectfully submitted,

OLDHAM & OLDHAM CO., LPA

A handwritten signature in black ink, appearing to read "Mark A. Watkins".

Mark A. Watkins  
Registration 33,813

MAW/clj

Twin Oaks Estate  
1225 West Market Street  
Akron, OH 44313-7188  
(330) 864-5550

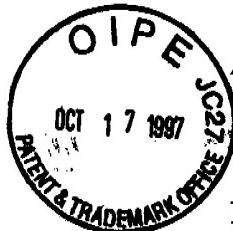
Attorney Docket: 6014-2

**EXAMINER:** Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<b>INFORMATION DISCLOSURE CITATION</b> <i>(Use several sheets if necessary)</i>				Docket Number (Optional)	Application Number		
				601	08/918,582		
				Applicant(s) Keith R. Leighton			
				Filing Date 08/17/97	Group Art Unit		
<b>PATENT &amp; TRADEMARK OFFICE</b> <b>PATENT DOCUMENTS</b>							
EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
DHS	AL	5,173,840	12/22/92	Kodai et al.	—	—	
DHS	AM	5,272,596	12/21/93	Honore et al.	—	—	
DHS	AN	5,412,192	5/2/95	Hoss	—	—	
DHS	AO	5,268,699	12/7/93	Laute et al.	—	—	
<b>FOREIGN PATENT DOCUMENTS</b>							
REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						YES	NO
<b>OTHER DOCUMENTS</b> <i>(Including Author, Title, Date, Pertinent Pages, Etc.)</i>							
<b>EXAMINER</b> <i>Daniel Sherr</i>				<b>DATE CONSIDERED</b> <i>11/3/98</i>			
<b>EXAMINER:</b> Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							

O/10

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



Applicant: Leighton, Keith R. Examiner:  
Serial No: 08/918,582 Art Unit:  
Filed: 08/17/97 Date: October 17, 1997

For: HOT LAMINATION PROCESS FOR THE MANUFACTURE  
COMBINATION CONTACT/CONTACTLESS SMART CARD AND  
PRODUCT RESULTING THEREFROM

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

TRANSMITTAL

Transmitted herewith:

- 1) Information Disclosure Statement Under 37 CFR § 1.97;
- 2) PTO-Form 1449 and fifteen references; and
- 3) Acknowledgement of Receipt/Return Card

Respectfully submitted,

OLDHAM & OLDHAM CO., LPA



Mark A. Watkins, Esq.  
Registration 33,813

Twin Oaks Estate  
1225 West Market Street  
Akron, OH 44313-7188  
(330) 864-5550

Our File: 6014-2

CERTIFICATE OF MAILING

I hereby certify that this Information Disclosure Statement and all documents referred to as enclosed therein are deposited with the United States Postal Service on this date in an envelope as "Express Mail Post Office to Addressee" Mailing Label No. EM094965196US addressed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231.

October 17, 1997  
Date

  
Mark A. Watkins, Esq.



**UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/918,582	08/19/97	LEIGHTON	K 60142

MM51/1118

EXAMINER

SHERR, D

ART UNIT

PAPER NUMBER

2376

3

DATE MAILED:

11/18/98

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

**Office Action Summary**

Application No. <b>08/918,582</b>	Applicant(s) <b>Leighton</b>
Examiner <b>Daniel Sherr</b>	Group Art Unit <b>2876</b>



- Responsive to communication(s) filed on \_\_\_\_\_.
- This action is FINAL.
- Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

**Disposition of Claims**

- Claim(s) 1-24 is/are pending in the application.
- Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- Claim(s) \_\_\_\_\_ is/are allowed.
- Claim(s) 1-24 is/are rejected.
- Claim(s) \_\_\_\_\_ is/are objected to.
- Claims \_\_\_\_\_ are subject to restriction or election requirement.

**Application Papers**

- See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- The proposed drawing correction, filed on \_\_\_\_\_ is  approved  disapproved.
- The specification is objected to by the Examiner.
- The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. § 119**

- Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- All  Some\*  None of the CERTIFIED copies of the priority documents have been
- received,
  - received in Application No. (Series Code/Serial Number) \_\_\_\_\_
  - received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

- Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

**Attachment(s)**

- Notice of References Cited, PTO-892
- Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_
- Interview Summary, PTO-413
- Notice of Draftsperson's Patent Drawing Review, PTO-948
- Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Application/Control Number: 08/918,582

Page 2

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***Claim Objections***

1. Claims 1, 9, 15 and 21 are objected to because of the following informalities:

Replace "at one" in claim 1, line 7 with --at least one--.

Replace "10" in claim 9, line 2 with --10%--.

Replace "techniques" in claim 15, line 2 with --technique--.

Replace "at one" in claim 21, line 11 with --at least one--.

Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2, 5-9, 11-17 and 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haghiri-Tehrani et al (US 4,450,024) in view of Sitzberger (US 3,994,225).

Haghiri-Tehrani et al shows a card (column 5, lines 7-47) which teaches: For claim 1, a hot lamination process for the manufacture of a plastic card, the process comprising the steps of providing first and second plastic core sheets; positioning at least one electronic element between the first and second plastic core sheets to form a layered core; positioning the core in a laminator

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apparatus, heating the core in the laminator, thereafter applying pressure to the core such that at least one electronic element is encapsulated in the core, and thereafter cooling the core in conjunction with laminator pressure being applied to the core, the core including an upper and lower surfaces; and printing on at least one of the upper and lower surfaces of the core such that a layer of ink is applied to the at least one upper and lower surface of the core. For claim 2, a hot lamination process having a step, comprising milling a region of the core to a controlled depth so as to form a cavity which exposes at least one contact pad of the electronic element. For claim 5, a hot lamination process wherein the first and second plastic core sheets are made from a material selected from the group consisting of polyvinyl chloride, polyester, and acrylonitrile-butadiene-styrene, wherein each of the sheets has a thickness in the range of 0.007 inches to 0.024 inches. For claim 6, a hot lamination process wherein the first and second plastic core sheets have a thickness of approximately 0.0125 inches. For claim 7, a hot lamination process where a step is carried out by constructing a first book including the core and at least first and second laminating plates respectively adjacent to the upper and lower surfaces of the core; positioning the book in the laminator apparatus; closing the laminator apparatus and heating the core for a first predetermined amount of time without applying essentially any laminator ram pressure to the core; increasing the laminator ram pressure following the passage of the first predetermined amount of time to apply pressure to the core in conjunction with the heating of the core; cooling the core in the laminator in conjunction with laminator ram pressure being applied to the core. For claim 8, a hot lamination process wherein a step is carried out with a ram pressure that is

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greater than the ram pressure utilized in a step. For claim 9, a hot lamination process wherein the laminator pressure utilized in a step ranges from about 10% to about 40% greater than the ram pressure utilized in a previous step.

Haghiri-Tehrani et al also shows a card (column 5, lines 7-47) which teaches: For claim 11, a hot lamination process having a step comprising positioning the core in a laminator apparatus with a layer of overlaminant film on at least one of the upper and lower surfaces of the core in the laminator to thereby form a sheet of plastic card stock. For claim 12, a hot lamination process wherein a step is carried out by heating the core to a temperature in the range of 300 degrees F to 370 degrees F for at least 5 to 10 minutes. For claim 13, a hot lamination process wherein a step is carried out by increasing the laminator pressure to a pressure approximately in the range of 200 p.s.i. to 450 p.s.i. on the core for at least 10 minutes. For claim 14, a hot lamination process wherein a step is carried out utilizing a printing press. For claim 15, a hot lamination process wherein a step is carried out utilizing a coating technique selected from the group consisting of silk screen printing, offset printing, letterpress printing, screen printing, roller coating, spray printing and litho-printing. For claim 16, a hot lamination process where a step is carried out by positioning the core between first and second sheets of overlaminant film such that a layer of overlaminant film is laminated to both the upper and lower surfaces of the core. For claim 17, a hot lamination process comprising a further step of inserting an electronic contact element into the cavity. For claim 20, a hot lamination process wherein a step is carried out by positioning the core with the layer of overlaminant film in the laminator apparatus between first

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and second laminating plates, wherein at least one of the first and second laminating plates includes a highly polished surface in contact with the layer of overlaminant film. For claim 21, a hot lamination process for the manufacture of a plastic card, the process comprising the steps of providing first and second plastic core sheets, at least one core sheet having a cavity formed therein; positioning at least one electronic element having at least one electronic subcomponent between the first and second plastic core sheets to form a layered core, the cavity positioned so as to expose the at least one contact pad therein; inserting a spacer into the cavity, the spacers substantially filling the cavity covering the at least one electronic sub-component; positioning the core in a laminator apparatus, heating the core in the laminator, thereafter applying ram pressure to the core such that the at least one electronic element is encapsulated in the core, and thereafter cooling the core in conjunction with laminator ram pressure being applied to the core, the core including an upper and lower surfaces; printing on at least one of the upper and lower surfaces of the core such that a layer of ink is applied to the at least one upper and lower surface of the core; and removing the spacer from the cavity of the core. For claim 22, a hot lamination process wherein the electronic sub-component comprises one or more elements from the group consisting of a microprocessor chip, a contact pad, a transponder and a contact sensor. For claim 23, a plastic card comprising a plastic core including at least one electronic element embedded therein, the core having an upper surface and a lower surface; a coating on at least one of the upper and lower surfaces; and a layer of overlaminant film positioned on the at least one coated surface, wherein the card has an overall thickness in the range of approximately 0.028 inches to 0.032

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inches with a variation in overall thickness across the upper and lower surfaces being no greater than approximately 0.0005 inches. For claim 24, a plastic card wherein the core is made from a plastic selected from the group consisting of polyvinyl chloride, polyester, and acrylonitrile-butadiene-styrene.

Haghiri-Tehrani et al fails to show, for claim 1 and 21, the step of cutting at least one card from the sheet of plastic card stock. However, Sitzberger shows a sheet of badge stock (column 1, line 46-63) which teaches, for claim 1 and 21, the step of cutting at least one card from the sheet of plastic card stock. It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Sitzberger with the teachings of Haghiri-Tehrani et al because it is profitable to produce badges in a highly efficient manner (column 1, line 29-33).

4. Claims 3-4, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haghiri-Tehrani et al (US 4,450,024) in view of Sitzberger (US 3,994,225) as applied to claims 1-2, 5-9, 11-17 and 20-24 above, and further in view of Hida et al (US 4,841,134).

Haghiri-Tehrani et al as modified by Sitzberger fails to show: For claim 3, a hot lamination process wherein the step of positioning the core in a laminator apparatus is carried out by positioning the core between first and second laminating plates having a matte finish to provide at least one of the upper and lower core surfaces with a correspondingly textured surface. For claim 4, a hot lamination process wherein at least one of the first and second laminating plates includes matte finish to provide both at least one outer surface of the core with a correspondingly textured surface. For claim 10, a hot lamination process wherein at least one of the first and

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second laminating plates in a matte finished laminating plate to provide at least one of the upper and lower surfaces of the core with a corresponding matte finish.

However, Hida et al shows applying a matte on a substrate surface (column 5, lines 6-13) which teaches: For claim 3, a hot lamination process wherein the step of positioning the core in a laminator apparatus is carried out by positioning the core between first and second laminating plates having a matte finish to provide at least one of the upper and lower core surfaces with a correspondingly textured surface. For claim 4, a hot lamination process wherein at least one of the first and second laminating plates includes matte finish to provide both at least one outer surface of the core with a correspondingly textured surface. For claim 10, a hot lamination process wherein at least one of the first and second laminating plates in a matte finished laminating plate to provide at least one of the upper and lower surfaces of the core with a corresponding matte finish. It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Hida et al with the teaching of Haghiri-Tehrani et al as modified by Sitzberger because it helps air escape during pressing to prevent unevenness on the substrate surface (column 5, lines 6-13).

5. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haghiri-Tehrani et al (US 4,450,024) in view of Sitzberger (US 3,994,225) as applied to claims 1-2, 5-9, 11-17 and 20-24 above, and further in view of Mundigl et al (US 5,809,633).

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Haghiri-Tehrani et al as modified by Sitzberger fails to show, for claims 18 and 19, a hot lamination process wherein at least one electronic element is a micro-chip and an associated circuit board or wire antenna or is a read/write integrated chip and an associated antenna.

However, Mundigl et al shows a carrier module 1 (column 2, lines 36-62) which teaches, for claims 18 and 19, a hot lamination process wherein at least one electronic element is a micro-chip and an associated circuit board or wire antenna or is a read/write integrated chip and an associated antenna. It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Mundigl et al to the teachings of Haghiri-Tehrani et al as modified by Sitzberger because it is desirable to transfer data through a coil (column 1, lines 17-21).

### *Conclusion*

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Yanaka et al (US 5,067,008) and Uenishi et al (US 5,208,450) disclose IC cards.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Daniel H. Sherr** whose telephone number is (703) 305-0267. The examiner can normally be reached between the hours of 7:30 AM to 6:00 PM Monday thru Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Hajec, can be reached on (703) 308-4075. The fax phone number for this Group is (703)308-5841 or (703) 308-7722.

Application/Control Number: 08/918,582

Page 9

Art Unit: 2876

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [donald.hajec@uspto.gov].

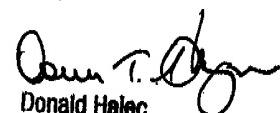
All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

Daniel H. Sherr



November 4, 1998



Donald Hajec  
Supervisory Patent Examiner  
Technology Center 2800

<b><i>Notice of References Cited</i></b>			Application No.	Applicant(s)		
			08/918,582	Leighton		
Examiner			Group Art Unit			
Daniel Sherr			2876	Page 1 of 1		
<b>U.S. PATENT DOCUMENTS</b>						
	DOCUMENT NO.	DATE	NAME		CLASS	SUBCLASS
A	5,067,008	11/91	Yanaka et al		357	81
B	5,208,450	5/93	Uenishi et al		235	492
C	4,450,024	5/84	Haghiri-Tehrani et al		156	108
D	5,809,633	9/98	Mundigl et al		29	600
E	4,841,134	6/89	Hida et al		235	488
F	3,994,225	11/76	Sitzberger		101	426
G						
H						
I						
J						
K						
L						
M						
<b>FOREIGN PATENT DOCUMENTS</b>						
	DOCUMENT NO.	DATE	COUNTRY	NAME	CLASS	SUBCLASS
N						
O						
P						
Q						
R						
S						
T						
<b>NON-PATENT DOCUMENTS</b>						
	DOCUMENT (Including Author, Title, Source, and Pertinent Pages)					DATE
U						
V						
W						
X						



GP2876#

Practitioner's Docket No. 6014-2

PATENT

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Leighton, Keith R  
 Application No.: 08/918,582  
 Filed: 08/19/1997  
 For: Hot Lamination Process for the Manufacture Combination Contact/Contactless Smart Card and Product Resulting Therefrom

Group No.: 2876  
 Examiner: Sherr, D.

#  
4-2-99  
T. Flawed

Assistant Commissioner for Patents  
 Washington, D.C. 20231

## AMENDMENT TRANSMITTAL

1. Transmitted herewith is an amendment for this application.

RECEIVED

MAR 25 1999

TECHNOLOGY CENTER 2800

## STATUS

2. Applicant is a small entity. A statement was already filed.

## EXTENSION OF TERM

3. The proceedings herein are for a patent application and the provisions of 37 C.F.R. 1.136 apply. Applicant petitions for an extension of time under 37 C.F.R. 1.136 (fees: 37 C.F.R. 1.17(a)(1)-(4)) for one month:

03/23/1999 AIBRAHIM 00000066 08918582 Fee: \$55.00

01 FC:215 55.00 OP

## CERTIFICATE OF MAILING/TRANSMISSION (37 C.F.R. 1.8(a))

I hereby certify that, on the date shown below, this correspondence is being:

## MAILING

## FACSIMILE :

- deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

- transmitted by facsimile to the Patent and Trademark Office.

Date: 3/15/99

Mark A. Watkins  
Signature

Mark A. Watkins  
(type or print name of person certifying)

(Amendment Transmittal—page 1 of 2)

**FEE FOR CLAIMS**

4. The fee for claims (37 C.F.R. 1.16(b)-(d)) has been calculated as shown below:

(Col. 1)	(Col. 2)	(Col. 3) SMALL ENTITY		
Claims Remaining After Amendment	Highest No. Previously Paid For	Present Extra	Rate	Addit. Fee
Total 18	Minus 20	= 0	x \$9 =	\$0
Indep. 2	Minus 3	= 0	x \$39 =	\$0
First Presentation of Multiple Dependent Claim			+ \$130 =	\$0
			Total Addit. Fee	\$0

No additional fee for claims is required.

**FEE PAYMENT**

5. Attached is a check in the sum of \$55.00.

**FEE DEFICIENCY**

6. If any additional extension and/or fee is required, charge Account No. 15-0450.



SIGNATURE OF PRACTITIONER

Reg. No. 33,813

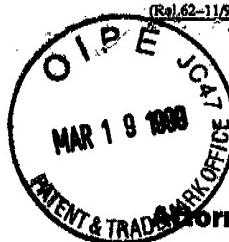
Mark A. Watkins

Tel. No.: (330) 864-5550

Oldham & Oldham Co., L.P.A.  
1225 W. Market St.

Customer No.: 021324

Akron, OH 44313-7188



(Ref.62-11/94 Pub.605)

FORM 5-8

5-63

Attorney's Docket No. 6014-2

PATENT  
RECEIVED

NOV 30 1999

In re application of: Leighton

Serial No.: 08 / 918,582 Group No.: 2876

Filed: August 19, 1997 Examiner: Sherr, D.

For: HOT LAMINATION PROCESS FOR THE MANUFACTURE COMBINATION CONTACT/CONTACTLESS SMART CARD AND PRODUCT RESULTING THEREFROM

Publishing Division  
09Commissioner of Patents and Trademarks  
Washington, D.C. 20231

## REQUEST FOR CORRECTED FILING RECEIPT

1. Attached is a copy of the official filing receipt received from the PTO in the above application for which issuance of a corrected filing receipt is respectfully requested.

2. There is an error with respect to the following data which is:

 Incorrectly entered

and/or

 omitted.

## Error In

1.  Applicant's name
2.  Applicant's address
3.  Title
4.  Filing Date
5.  Serial Number
6.  Foreign/PCT Application Re:
7.  Other

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
7. see PAGE 2

## CERTIFICATE OF MAILING/TRANSMISSION (37 CFR 1.8a)

I hereby certify that this correspondence is, on the date shown below, being:

## MAILING

deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to the Commissioner of Patents and Trademarks, Washington, D.C. 20231

Date: March 15, 1999

## FACSIMILE

transmitted by facsimile to the Patent and Trademark Office

Signature

Mark A. Watkins

(type or print name of person certifying)

(Request for Corrected Filing Receipt [5-8]—page 1 of 2)

Receipt

RECEIVED  
MAR 30 1999  
Correct data  
TECHNOLOGY CENTER 2800

Applicant hereby requests that the Applicant Processing Division's Customer Correction Branch issue a corrected Filing Receipt that this application is a Continuation-in-part of co-pending application 08/727,789. This copendency was indicated in the originally filed specification at page 1, line 6 & 7. (Applicant requests that the Correction Branch make the indicated correction and issue a corrected Filing Receipt for this application.)

3. *(complete the following applicable item A or B).*

A.  The correction(s) is/are not due to any error by applicant and no fee is due.

**OR**

B.  At least one of the above corrections is due to applicant's error and the fee therefor under 37 CFR 1.19(h) of \$25.00 is paid as follows:

- Enclosed is check for \$25.00.
- Charge Account \_\_\_\_\_ \$25.00.

  
\_\_\_\_\_  
**SIGNATURE OF ATTORNEY**

Reg. No.: 33,813

Mark A. Watkins

(type or print name of attorney)

Oldham & Oldham Co., LPA  
1225 West Market Street

(P.O. Address)

Akron, Ohio 44313-7188

(Request for Corrected Filing Receipt [5-8]—page 2 of 2)

PTO-103X  
(Rev. 8-85)

FILING RECEIPT



FEB 02 1998

UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

APPLICATION NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTORNEY DOCKET NO.	DRWGS	TOT CL	IND CL
08/918,582	08/19/97	3612	\$429.00	60142	6	24	3

MARK A WATKINS  
OLDHAM & OLDHAM CO  
1225 WEST MARKET STREET  
AKRON OH 44313-7188

60142

Receipt is acknowledged of this nonprovisional Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Application Processing Division's Customer Correction Branch within 10 days of receipt. Please provide a copy of the Filing Receipt with the changes noted thereon.

## Applicant(s)

KEITH LEIGHTON, LORAIN, OH.

FOREIGN FILING LICENSE GRANTED 01/26/98 \* SMALL ENTITY \*

## TITLE

HOT LAMINATION PROCESS FOR THE MANUFACTURE COMBINATION CONTACT/CONTACTLESS SMART CARD AND PRODUCT RESULTING THEREFROM

PRELIMINARY CLASS: 156

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MAR 30 1999  
TECHNOLOGY CENTER 2800

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Keith Leighton  
Serial No. 08/918,582  
Filed: 8/19/97

Examiner: Sherr, D.  
Art Unit: 2876  
Date: March 12, 1999



Title: HOT LAMINATION PROCESS FOR THE MANUFACTURE COMBINATION CONTACT/CONTACTLESS SMART CARD AND PRODUCT RESULTING THEREFROM

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

RESPONSE AND AMENDMENT A

RECEIVED

Dear Sir:

The following response and amendment is responsive to the Office Action mailed November 18, 1998. Also included with this response and amendment is a request for an one-month extension of the shortened statutory period, which expired February 18, 1999.

MAR 25 1999

TECHNOLOGY CENTER 2800

In the Specification:

In the Title, after the word "MANUFACTURE", please insert the words --OF A--.

In page 1, line 13 delete the words "combi-chip" and insert therefore the words --dual function--.

At page 3, line 2, delete the words "COMBI-CHIP" and insert therefore the words --dual function--.

At page 3, line 21 delete the words "combi-chip" and insert therefore the words --dual function--.

At page 7, line 14 delete the words "combi-chip" and insert therefore the words --dual function--.

At page 23, line 4 delete the words "combi-chip" and insert therefore the words --dual function--.

**In the Claims:**

Please delete the following claims: 2, 7, 10, 20, 23, and 24.

1.(Amended) A [hot lamination] process for incorporating at least one electronic element in the manufacture of a plastic card, [said process] comprising the steps of:

- (a) providing first and second plastic core sheets;
- (b) positioning said at least one electronic element in the absence of a non-electronic carrier directly between said first and second plastic core sheets to form a [layered] core[;], said plastic core sheets defining a pair of inner and outer surfaces of said core;
- (c) positioning said core in a laminator apparatus, and subjecting said core to a heat and pressure cycle, said heat and pressure cycle comprising the steps of:
  - (i) heating said core [in said laminator,] for a first period of time;
  - (ii) [thereafter] applying a first pressure to said core for a second period of time such that said at least one electronic element is encapsulated [in] by said core[,];
  - (iii) [and thereafter] cooling said core [in conjunction with laminator ram] while applying a second pressure [being applied] to said core [, said core including an upper and lower surfaces];
- (d) [printing on] coating at least one of said [upper and lower] outer surfaces of said core [such that] with a layer of ink [is applied to said at least one upper and lower surface of said core;]
- (e) cutting at least one card from said sheet of plastic card stock.];
- (e) milling a region of said core to a controlled depth so as to form a cavity which exposes at least one contact pad of said electronic element.

2. (Amended) [A hot lamination] The process for incorporating at least one electronic element in the manufacture of a plastic card as recited in claim 1, wherein said [step (c) of positioning said core in a] laminator apparatus [is carried out by positioning said core between] has first and second laminating plates, at least one of said first and second laminating plates having a matte finish [to provide at least one of said upper and lower core surfaces with a corresponding] for creating a textured surface on at least one of said outer surfaces of said core.

3 X (Amended) [A hot lamination] The process for incorporating at least one electronic element in the manufacture of a plastic card as recited in claim 3, wherein each of said first and second laminating plates [includes] has a matte finish [to provide both of said upper and lower surfaces of said core with a correspondingly] for creating said textured surface on both of said outer surfaces of said core.

4 X (Amended) [A hot lamination] The process for incorporating at least one electronic element in the manufacture of a plastic card as recited in claim 1, wherein said first and second plastic core sheets are made from a material selected from the group consisting of polyvinyl chloride, polyester, and acrylonitrile-butadiene-styrene, [wherein] each of said sheets [has] having a thickness in the range of 0.007 [inches] to 0.024 [inches] inch.

5 X (Amended) [A hot lamination] The process for incorporating at least one electronic element in the manufacture of a plastic card as recited in claim 5, wherein said first and second plastic core sheets have a thickness of approximately 0.0125 inch [inches].

cont.

A 6 X (Amended) [A hot lamination] The process for incorporating at least one electronic element in the manufacture of a plastic card as recited in claim X wherein [said step (c5) is carried out with a ram] said second pressure [that] is greater than [the ram] said first pressure [utilized in step (c4)].  
DHS

7 X (Amended) [A hot lamination] The process for incorporating at least one electronic element in the manufacture of a plastic card as recited in claim 8, wherein [the laminator] said second pressure [utilized in step (c5)] ranges from about 10% to about 40% greater than [the ram] said first pressure [utilized in step (c4)].

A 8 X (Amended) [A hot lamination] The process for incorporating at least one electronic element in the manufacture of a plastic card as recited in claim [7] 1, wherein said [step (c3) is carried out by heating said] core is heated in step (c)(i) to a temperature in the range of [300] 275°F to [370] 400°F and said first period of time is [for] at least five (5) [5 to 10] minutes.

10 X (Amended) [A hot lamination] The process for incorporating at least one electronic element

in the manufacture of a plastic card as recited in claim [12] 1, wherein said [step (c4) is carried out by increasing said laminator ram] first pressure [to a pressure] is approximately [in the range of 200 p.s.i. to] 450 p.s.i. and said second period of time is [for] at least 10 minutes.

~~11~~ (Amended) [A hot lamination] The process for incorporating at least one electronic element in the manufacture of a plastic card as recited in claim 1, wherein said step (d) is carried out utilizing a printing press.

~~12~~ (Amended) [A hot lamination] The process for incorporating at least one electronic element in the manufacture of a plastic card as recited in claim 1, wherein said step (d) is carried out utilizing a coating technique [techniques] selected from the group consisting of silk screen printing, offset printing, letterpress printing, screen printing, roller coating, spray printing, and litho-printing.

~~A 2~~ <sup>13</sup> (Amended) [A hot lamination] The process for incorporating at least one electronic element in the manufacture of a plastic card as recited in claim 1, wherein said step (e) [is carried out by positioning said core between first and second sheets of overlaminant film such that a layer of overlaminant film is laminated to both said upper and lower surfaces of said core] of applying a layer of overlaminant film comprises the further steps of:

- (a) positioning an overlaminant film on at least one ink coated surface of said core;
- (b) subjecting said core to a second heat and pressure cycle comprising the steps of:
  - (i) heating said core to a temperature between approximately 175°F to 300°F for approximately 10 to 25 minutes;
  - (ii) applying approximately 1000 p.s.i. pressure to said core; and
  - (iii) cooling said core to a temperature in the range of approximately 40°F to 65°F for approximately 10 to 25 minutes.

~~A 3~~ <sup>15</sup> (Amended) [A hot lamination] The process for incorporating at least one electronic element in the manufacture of a plastic card as recited in claim 1, wherein said at least one electronic

element is a micro-chip and an associated circuit board antenna or an associated wire antenna.

~~16~~ (Amended) [A hot lamination] The process for incorporating at least one electronic element in the manufacture of a plastic card as recited in claim 1, wherein said at least one electronic element is a read/write integrated chip and an associated antenna.

~~17~~ (Amended) A [hot lamination] process for incorporating at least one electronic element having at least one electronic subcomponent in the manufacture of a plastic card, [said process] comprising the steps of:

(a) providing first and second plastic core sheets, at least one core sheet having a cavity formed therein;

(b) positioning said at least one electronic element [having at least one electronic subcomponent] in the absence of a non-electronic carrier between said first and second plastic core sheets to form a layered core, said plastic core sheets defining a pair of inner and outer surface of said core, and said cavity positioned so as to expose said at least one [contact pad] electronic subcomponent therein;

(c) inserting a spacer into said cavity, said spacer substantially filling said cavity and covering said at least one electronic subcomponent;

(d) positioning said core in a laminator apparatus, and subjecting said core to a heat and pressure cycle, said heat and pressure cycle comprising the steps of:

(i) heating said core [in said laminator,] for a first period of time;

(ii) [thereafter] applying a first [ram] pressure to said core for a second period of time such that said at least one electronic element is encapsulated [in] by said core[.];

(iii) [and thereafter] cooling said core [in conjunction with laminator ram] while applying a second pressure [being applied] to said core [, said core including an upper and lower surfaces];

(e) [printing on] coating at least one of said [upper and lower] outer surfaces of said core [such that] with a layer of ink[ is applied to at least one upper and lower surface of said core];

(f) removing said spacer from the cavity of said core[.]

### **Amendment to Specification**

The correction to the title of the specification is offered to correct a grammar/syntax error.

The specification has been amended at several points to delete the reference to the words "combi-chip" and replacing them therefore with the words "dual function". Applicant is making this amendment to the specification because the term "combi-chip" has become a U.S. Registered Trademark. Applicant's wish to avoid the use of this registered trademark in the application and submit that the amendment as indicated presents no new matter to the specification. Support for the amendment is found at page 3, lines 1-3. Applicant includes with this amendment a printout from the Patent Office website showing the registration data for the mark "combi-chip".

### **Amendments to Claims**

The Examiner has objected to several formalities in the claims, and has kindly offered suggestions to overcome the objection. The amendments to claims 1, 9, 15, and 21 are responsive to the Examiner's suggestions.

The amendments made to the claims have not been made to avoid the 103(a) rejections. It is believed that the claims as originally submitted are unobvious over the cited patents. The amendments were made to clarify claim language and to insure consistent language throughout both the specification and the claims.

### **Rejections based on 35 U.S.C. 103**

*Rejection of Claims 1-2, 5-9, 11-17, and 20-24 over Haghiri-Tehrani in view of Sitzberger*

The Examiner has rejected claims 1-2, 11-17, and 20-24 as being unpatentable over Haghiri-Tehrani et al (U.S. 4,450,024) in view of Sitzberger (U.S. 3,994,225). It is the Examiner's position that it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Sitzberger with the teachings of Haghiri-Tehrani et al because it is profitable to produce badges in a highly efficient manner. The applicant respectfully disagrees and respectfully requests that the Examiner reconsider the rejection based on the following argument.

Claims 7 and 20 have been deleted.

Haghiri-Tehrani et al (U.S. 4,450,024) in view of Sitzberger (U.S. 3,994,225). It is the Examiner's position that it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Sitzberger with the teachings of Haghiri-Tehrani et al because it is profitable to produce badges in a highly efficient manner. The applicant respectfully disagrees and respectfully requests that the Examiner reconsider the rejection based on the following argument.

Claims 7 and 20 have been deleted.

From the Examiner's rejection, it is apparent that the Examiner claims to have found each of the elements of applicant's claimed invention anticipated by the '024 patent with the exception of the cutting step. Further, the Examiner apparently claims to have found the cutting step element anticipated by the '225 patent, which the Examiner combines with the '024 patent as a basis for the obviousness rejection under section 103(a). Applicant maintains that the '024 patent does not teach the process of the present application even in the absence of the cutting step.

The '024 patent claims a lamination process for making an electronic card which protects the electronic element of the card by first placing it in a recess formed within a card layer so as to avoid damage to the electronic element from localized pressure applied in the lamination process. The patent then requires that a "buffer zone" be present within the recess. Even the broadest of claims of the '024 patent require a recess and a buffer zone, for and protecting the electronic element. These are required by the '024 invention in order to enable the card assembly to be subjected to a full laminating pressure.

No such protective elements are desired or necessary to the invention of the present application. Further, the invention taught by the '024 patent requires that the electronic element also be placed in a protective carrier disk (6), which is subsequently located within the recess.

The controlled use of a heat and pressure cycle of the present invention eliminates the requirement of both a protective carrier disk for the electronic element and/or a recess or other buffer zone formed in one or more of the card layers for carrying and protecting the electronic element. The process of the present invention allows the electronics-containing core to be

subjected to the full laminating pressure without use of a recess in a card layer. Unlike anything shown in the prior art, the electronic unit is placed directly between two (2) plastic sheets. Admittedly, the '024 patent does make reference to card forming processes which vary pressure with temperature. '*024 Patent, col.6, ln. 30-46.* However, there is nothing in the '024 patent which suggests the heat and pressure cycle of the present invention. The '024 patent merely discusses the variation of pressure with temperature, it does not suggest a sequence of steps or the duration of steps which might be used to encapsulate an electronic element by a plastic card. The '024 patent does not discuss a cooling step, nor does it propose a solution to the relative pressures to be applied in the steps of the cycle.

Applicant therefore submits that claims 1-2, 5-9, 11-17, and 20-24 are not obvious over the cited art.

*Rejection of Claims 3-4 and 10 over Haghiri-Tehrani in view of Sitzberger and Hida*

The Examiner has rejected claims 3-4 and 10 as being unpatentable over Haghiri-Tehrani et al in view of Sitzberger and further in view of Hida et al (U.S. 4,841,134). It is the Examiner's position that it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Hida et al with the teaching of Haghiri-Tehrani as modified by Sitzberger because it helps air escape during pressing to prevent unevenness on the substrate surface. The applicant respectfully disagrees and respectfully requests that the Examiner reconsider the rejection based on the following argument.

Claim 10 has been deleted.

Applicant reiterates the argument presented for the rejection of claims 1-2, 11-17, and 20-24. Applicant submits again that as the '024 patent does not present the elements of the present invention, even in lieu of the limitation of the matte finish as recited in claims 3, 4, and 10, the claims are not obvious over the cited art.

*Rejection of claims 18 and 19 over Haghiri-Tehrani in view of Sitzberger and Mundigl*

The Examiner has rejected claims 18 and 19 as being unpatentable over Haghiri-Tehrani in view of Sitzberger and further in view of Mundigl et al (U.S. 5,809,633). It is the Examiner's position that it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Mundigl et al to the teachings of Haghiri-Tehrani et al as modified

by Sitzberger because it is desirable to transfer data through a coil. The applicant respectfully disagrees and respectfully requests that the Examiner reconsider the rejection based on the following argument.

Applicant reiterates the argument presented for the rejection of claims 1-2, 5-9, 11-17, and 20-24. Applicant submits again that as the '024 patent does not present the elements of the present invention, even in lieu of the limitation of the electronic element as recited in claims 18 and 19 the claims are not obvious over the cited art.

**Conclusion**

Based on the foregoing, the applicant earnestly requests that the Examiner reconsider the rejection of the claims and issue a notice of allowance for all claims.

Respectfully submitted,  
OLDHAM & OLDHAM CO., LPA



Mark A. Watkins, Esq.  
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Attorney Docket No. 6014-2

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(1 of 1)



**Word Mark** *COMBICHIP*

**Pseudo Mark** COMBINE CHIP

**Owner Name** (APPLICANT) Gemplus G.C.A

**Owner Address** ZI Athelia III Voi Antiope 13705 La Ciota FRANCE CORPORATION FRANCE

**Attorney of Record** ROLAND PLOTEL

**Serial Number** 75-462058

**Filing Date** 04/03/1998

**Section 1(B) indicator** SECTION 1 (B)

**Mark Drawing Code** (1) TYPED DRAWING

**Register** PRINCIPAL

**Section 44 Indicator** SECT 44

**Priority Date** 10/03/1997

**Type of Mark** TRADEMARK; SERVICE MARK

RECEIVED

MAR 25 1999

TECHNOLOGY CENTER 2800

**International Class** 009

**Goods and Services** devices and equipment used in information processing; software including software that can be used in chips; integrated circuits and microcircuits used in memory cards or electronic labels; computer programs; coding microprogramming systems; chips, integrated circuits; printed circuits; microprogramming systems; chips, integrated circuits; printed circuits; microcircuits; cards containing chips, cards containing integrated circuits; identification labels; electronic labels; transponders; cards containing microcircuits; readers of cards containing chips, integrated circuits or microcircuits; devices and equipment functioning with cards containing chips, integrated circuits or microcircuits; electrical or electronic components, including semiconductors, devices containing semiconductors and microprocessors; magnetic cards; magnetic identification cards; devices for accessing and controlling access to information processing devices and equipment; devices for identification and authentication used in information process apparatuses and equipment; apparatuses and equipment allowing access to telephone networks; devices for accessing and controlling access and for identification and authentication used in telephone networks; telephone devices

**International Class** 016

<http://trademarks.uspto.gov/cgi-bin...+F+1+1+1+MS%2fcombichi>

<http://trademarks.uspto.gov/cgi-bin...4+0+1+119325+F+1+1+1+MS%2fcombichi>

**Goods and Services**

user manuals

**International Class**

038

**Goods and Services**

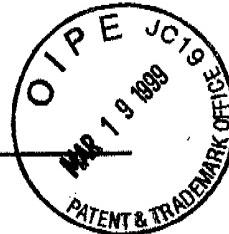
communication via computer terminals; communication via telephone; electronic messages; computer-aided transmission of messages, data and images; lending message transmission apparatuses; message and data transmission via telephone; lending computers, lending computer software

**International Class**

042

**Goods and Services**

professional advice without affecting the way of doing things; advice on computer-related matters; providing software especially in finances, entertainment, health, medicine and transport; services relating to research, customization and implementation of software, cards containing chips and cards containing integrated circuits; services relating to research and expertise in the area of computing; research on technical projects in the area of computing; services on software production; lending access time data base servers



(1 of 1)



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MAR 25 1999

TECHNOLOGY CENTER 2800

<b>Notice of Allowability</b>	Application No.	Applicant(s)
	08/913,582	Leighton
	Examiner Daniel Sherr	Group Art Unit 2876

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance and Issue Fee Due or other appropriate communication will be mailed in due course.

- This communication is responsive to March 25, 1999.
- The allowed claim(s) is/are 1, 3-6, 8, 9, 11-19, 21, and 22.
- The drawings filed on \_\_\_\_\_ are acceptable.
- Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- All  Some\*  None of the CERTIFIED copies of the priority documents have been
- received.
  - received in Application No./ (Series Code/Serial Number) \_\_\_\_\_.
  - received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- \*Certified copies not received: \_\_\_\_\_.
- Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

A SHORTENED STATUTORY PERIOD FOR RESPONSE to comply with the requirements noted below is set to EXPIRE THREE MONTHS FROM THE "DATE MAILED" of this Office action. Failure to timely comply will result in ABANDONMENT of this application. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

- Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL APPLICATION, PTO-152, which discloses that the oath or declaration is deficient. A SUBSTITUTE OATH OR DECLARATION IS REQUIRED.
- Applicant MUST submit NEW FORMAL DRAWINGS
- because the originally filed drawings were declared by applicant to be informal.
- including changes required by the Notice of Draftsperson's Patent Drawing Review, PTO-948, attached hereto or to Paper No. \_\_\_\_\_.
- including changes required by the proposed drawing correction filed on \_\_\_\_\_, which has been approved by the examiner.
- including changes required by the attached Examiner's Amendment/Comment.
- Identifying Indicia such as the application number (see 37 CFR 1.84(c)) should be written on the reverse side of the drawings. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.
- Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Any response to this letter should include, in the upper right hand corner, the APPLICATION NUMBER (SERIES CODE/SERIAL NUMBER). If applicant has received a Notice of Allowance and Issue Fee Due, the ISSUE BATCH NUMBER and DATE of the NOTICE OF ALLOWANCE should also be included.

**Attachment(s)**

- Notice of References Cited, PTO-892
- Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_
- Notice of Draftsperson's Patent Drawing Review, PTO-948
- Notice of Informal Patent Application, PTO-152
- Interview Summary, PTO-413
- Examiner's Amendment/Comment
- Examiner's Comment Regarding Requirement for Deposit of Biological Material
- Examiner's Statement of Reasons for Allowance

Application/Control Number: 08/918,582

Page 2

Art Unit: 2876

***Allowable Subject Matter***

1. Claims 1, 3-6, 8, 9, 11-19, and 21-22 are allowed.
2. The following is an examiner's statement of reasons for allowance:

No prior art or reasonable combination of art was found to overcome the limitation of the electronic unit being place directly between two plastic sheets.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. The application having been allowed, formal drawings are required in response to this Office action.

***Response to Arguments***

4. The arguments of the applicant have been taken into consideration and found persuasive. All claims were found allowable.

***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Daniel H. Sherr** whose telephone number is (703) 305-0267.

Application/Control Number: 08/918,582

Page 3

Art Unit: 2876

The examiner can normally be reached between the hours of 7:30 AM to 6:00 PM Monday thru Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Hajec, can be reached on (703) 308-4075. The fax phone number for this Group is (703)308-5841 or (703) 308-7722.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [donald.hajec@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

Daniel H. Sherr

April 8, 1999

  
Donald Hajec  
Supervisory Patent Examiner  
Technology Center 2800



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office

### NOTICE OF ALLOWANCE AND ISSUE FEE DUE

MM51/0412

MARK A WATKINS  
OLDHAM & OLDHAM CO  
1225 WEST MARKET STREET  
AKRON OH 44313-7168

APPLICATION NO.	FILING DATE	TOTAL CLAIMS	EXAMINER AND GROUP ART UNIT	DATE MAILED
08/918,582	08/19/97	018	SHERR, D	2876 04/12/99
First Named Applicant LEIGHTON,		35 USC 154 (b) term ext. =	0 Days	

TITLE OF INVENTION HOT LAMINATION PROCESS FOR THE MANUFACTURE OF A COMBINATION CONTACT/CONTACTLESS SMART CARD AND PRODUCT RESULTING THEREFROM (AS AMENDED)

ATTY'S DOCKET NO.	CLASS-SUBCLASS	BATCH NO.	APPLN. TYPE	SMALL ENTITY	FEES DUE	DATE DUE
2 60142	235-488.000	R59	UTILITY	YES	\$605.00	07/12/99

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED.**

**THE ISSUE FEE MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED.**

#### HOW TO RESPOND TO THIS NOTICE:

##### I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the status is changed, pay twice the amount of the FEE DUE shown above and notify the Patent and Trademark Office of the change in status, or
- B. If the status is the same, pay the FEE DUE shown above.

If the SMALL ENTITY is shown as NO:

- A. Pay FEE DUE shown above, or
- B. File verified statement of Small Entity Status before, or with, payment of 1/2 the FEE DUE shown above.

II. Part B-Issue Fee Transmittal should be completed and returned to the Patent and Trademark Office (PTO) with your ISSUE FEE. Even if the ISSUE FEE has already been paid by charge to deposit account, Part B Issue Fee Transmittal should be completed and returned. If you are charging the ISSUE FEE to your deposit account, section "4b" of Part B-Issue Fee Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give application number and batch number.  
Please direct all communications prior to issuance to Box ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.**

PATENT AND TRADEMARK OFFICE COPY

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Keith Leighton Examiner: Sherr, D.

Serial No. 08/918,582 Art Unit: 2876

Filed: 8/19/97 Date: May 14, 1999

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MAY 27 1999

Publishing Division

Title: HOT LAMINATION PROCESS FOR THE MANUFACTURE COMBINATION  
CONTACT/CONTACTLESS SMART CARD AND PRODUCT RESULTING  
THEREFROM

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

AMENDMENT AFTER ALLOWANCE UNDER 37 C.F.R. 312(a)

Dear Sir:

The following amendment is offered for entry after receipt of the Notice of Allowance mailed April 12, 1999, and before payment of the issue fee.

In the Claims:

1.(Twice Amended) A process for incorporating at least one electronic element in the manufacture of a plastic card, comprising the steps of:

- (a) providing first and second plastic core sheets;
- (b) positioning said at least one electronic element in the absence of a non-electronic carrier directly between said first and second plastic core sheets to form a core, said plastic core sheets defining a pair of inner and outer surfaces of said core;
- (c) positioning said core in a laminator apparatus, and subjecting said core to a heat and pressure cycle, said heat and pressure cycle comprising the steps of:
  - (i) heating said core for a first period of time;
  - (ii) applying a first pressure to said core for a second period of time such that said at least one electronic element is encapsulated by said core;
  - (iii) cooling said core while applying a second pressure to said core,

(d) [coating at least one of said outer surfaces of said core with a layer of ink;

(e)] milling a region of said core to a controlled depth so as to form a cavity which exposes at least one contact pad of said electronic element.

✓~~16.~~ (Twice Amended) The process for incorporating at least one electronic element in the manufacture of a plastic card as recited in claim [7]1, wherein said second pressure is greater than said first pressure.

✓~~17.~~ (Amended) A [hot lamination] process as recited in claim 1 having a further step following step [d)](c), said step comprising: positioning [said core in a laminator apparatus with] a layer of overlaminant film on at least one of said [upper and lower] surfaces of said core, positioning said overlaminant film and said core in a laminator apparatus and laminating said layer of overlaminant film to said core in said laminator to thereby form a sheet of plastic card stock.

✓~~18.~~ (Twice Amended) The process for incorporating at least one electronic element in the manufacture of a plastic card as recited in claim [1]27, wherein said coating step [(d)] is carried out utilizing a printing press.

✓~~19.~~ (Twice Amended) The process for incorporating at least one electronic element in the manufacture of a plastic card as recited in claim [1]27, wherein said coating step [(d)] is carried out utilizing a coating technique selected from the group consisting of silk screen printing, offset printing, letterpress printing, screen printing, roller coating, spray printing, and litho-printing.

✓~~20.~~ (Twice Amended) The process for incorporating at least one electronic element in the manufacture of a plastic card as recited in claim 1, [wherein said step (e) of applying a layer of overlaminant film comprises the further steps of] having a further step after said step (c) comprising:

(a) positioning an overlaminant film on said at least one [ink coated] surface of said

core;

(b) subjecting said core to a [second] heat and pressure cycle comprising the steps of:

- (i) heating said core to a temperature between approximately 175°F to 300°F for approximately 10 to 25 minutes;
- (ii) applying approximately 1000 p.s.i. pressure to said core; and
- (iii) cooling said core to a temperature in the range of approximately 40°F to 65°F for approximately 10 to 25 minutes.

17. (Amended) A [hot lamination] process as recited in claim [2]1 comprising the further step of inserting an electronic contact element into said cavity.

21. (Twice Amended) A process for incorporating at least one electronic element having at least one electronic subcomponent in the manufacture of a plastic card, comprising the steps of:

- (a) providing first and second plastic core sheets, at least one core sheet having a cavity formed therein;
- (b) positioning said at least one electronic element in the absence of a non-electronic carrier between said first and second plastic core sheets to form a layered core, said plastic core sheets defining a pair of inner and outer surface of said core, and said cavity positioned so as to expose said at least one electronic subcomponent therein;
- (c) inserting a spacer into said cavity, said spacer substantially filling said cavity and covering said at least one electronic subcomponent;
- (d) positioning said core in a laminator apparatus, and subjecting said core to a heat and pressure cycle, said heat and pressure cycle comprising the steps of:
  - (i) heating said core for a first period of time;
  - (ii) applying a first pressure to said core for a second period of time such that said at least one electronic element is encapsulated by said core;
  - (iii) cooling said core while applying a second pressure to said core;
- (e) [coating at least one of said outer surfaces of said core with a layer of ink];
- (f) removing said spacer from the cavity of said core[;]

(g) cutting at least one card from said sheet of plastic card stock].

22. (Amended) A [hot lamination] process as recited in claim 21, wherein said electronic sub-component comprises one or more elements from the group consisting of a microprocessor chip, a contact pad, a transponder, and a contact sensor.

Please add the following claims:

25. A plastic card constructed in accordance with claim 1.
26. A plastic card constructed in accordance with claim 21.
27. The process of claim 1, further comprising the step of coating at least one of said surfaces of said core with a layer of ink.
28. The process of claim 21, further comprising the step of coating at least one of said surfaces of said core with a layer of ink.
29. The process of claim 11, further comprising the step of coating said at least one surface of said core with a layer of ink prior to positioning said overlaminant film on said at least one surface of said core.
30. The process of claim 16, further comprising the step of coating said at least one surface of said core with a layer of ink prior to positioning said overlaminant film on said at least one surface of said core.

#### Remarks

Applicant has amended claims 8 and 17 to reflect the proper dependence of these claims.

Applicant has amended claims 11, 16, and 22 to reflect proper antecedent basis.

Applicant has amended claims 1, 14, 15, and 21, and added claims 27-30 to remove the limitation of the ink coating step from the independent claims and included this limitation in the dependent claims. Applicant maintains that the ink coating is an optional step in the claimed process, and as such the removal of this step from the independent claims does not affect the patentability of the claimed invention. Applicant notes that this amendment does not impact on

the Examiner's reasons for allowance, but further clarifies what the applicant regards as his invention.

Applicant has added claim 25 and 26, which were inadvertently omitted from the prior amendment. Applicant notes that as product-by-process claims, claims 25 and 26 do not impact on the Examiner's reasons for allowance.

### **Conclusion**

Applicant earnestly requests that the Examiner enter the proposed amendment after allowance inasmuch as the proposed changes do not impact the patentability of the invention, but further clarifies what the applicant regards as his invention.

Respectfully submitted,

OLDHAM & OLDHAM CO., L.P.A.

*m. Hatch*

Date: 5/14/99

Mark A. Watkins  
Registration 33,813

MAW/DD/srm

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Akron, OH 44313-7188  
(330) 864-5550

Attorney Docket: 6014-2

Practitioner's Docket No. 6014-2

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Leighton, Keith R

Application No.: 08/918,582

Group No.: 2876

Filed: 08/19/1997

Examiner: Sherr, D.

For: Hot Lamination Process for the Manufacture Combination Contact/Contactless Smart Card and Product Resulting Therefrom

Batch No. R59

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LETTER ACCOMPANYING AMENDMENT AFTER ALLOWANCE  
(37 C.F.R. § 1.312)

1. Please make the amendments shown in the attached papers in this application in the claims.

2. Type of amendment:

Other (affects the disclosure, the scope of any claim or adds a claim)

As shown in the remarks in the attached supplemental pages, there is stated the reason (1) why the amendment is needed, (2) why the proposed amended or new claims require no additional search or examination, (3) why the claims are patentable, and (4) why they were not earlier presented.

3. The issue fee has not been paid.

4. Additional fees:

Please charge Account 15-0450 for any additional fees that may be required by the filing of this paper.

MAY 27 1999

  
SIGNATURE OF PRACTITIONER

Reg. No.: 33,813

Mark A. Watkins

Tel. No.: (330) 864-5550

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Customer No.: 021324

1225 W. Market St.

Akron, OH 44313 USA



**UNITED STATES  
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/918,582	08/19/97	LEIGHTON	K 60142
		MM42/0714	<input type="checkbox"/> EXAMINER SHERR, D
			<input type="checkbox"/> ART UNIT 2876
			<input type="checkbox"/> PAPER NUMBER 8
DATE MAILED: 07/14/99			

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

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## DEPARTMENT OF COMMERCE

**Response to Rule 312  
Communication**

Application No. <b>08/918,582</b>	Applicant(s) <b>Leighton</b>
Examiner <b>Daniel Sherr</b>	Group Art Unit <b>2876</b>



The petition filed on \_\_\_\_\_ under 37 CFR 1.312(b) is granted. The paper has been forwarded to the examiner for consideration on the merits.

The amendment filed on May 18, 1999 under 37 CFR 1.312 has been considered, and has been:

- entered.
- entered as directed to matters of form not affecting the scope of the invention (Order 3311).
- disapproved. See explanation below.
- entered in part. See explanation below.

*The proposed amendment to the independent claims broadens their scope. This would require further consideration.*

*Since prosecution has been closed in this application, the amendment will not be entered.*



Donald Hajec  
Supervisory Patent Examiner  
Technology Center 2800



7560  
7310

#9 Jw B/S

Attorney Docket No.: 6014-2

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

<b>Applicant:</b>	Leighton	<b>Examiner:</b>	Sherr, D.
<b>Serial No:</b>	08/918,582	<b>Art Unit:</b>	2876
<b>Filed:</b>	08/19/97	<b>Date:</b>	April 20, 1999

**For:** HOT LAMINATION PROCESS FOR THE MANUFACTURE OF A COMBINATION CONTACT/CONTACTLESS SMART CARD AND PRODUCT RESULTING THEREFROM

**Box ISSUE FEE**  
**Commissioner of Patents and Trademarks**  
**Washington, D.C. 20231**

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**SUPPLEMENTAL DECLARATION**

I, Keith R. Leighton, as an inventor named in the application for Letters Patent for an invention entitled Hot Lamination Process for the Manufacture of a Combination Contact/contactless Smart Card and Product Resulting Therefrom No.08/918,582, filed in the United States Patent and Trademark Office on 08/19/97, hereby declare that I have reviewed and understand the contents of the specification and all amendments made in this case, including the claims and declare that the subject matter of all such amendments was part of my invention and was invented before the filing of the original application, above identified, for such invention. I also ratify all acts of my attorneys in the prosecution of this application.

I acknowledge the duty of candor under 37 CFR §1.56(a). I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, §1.56(a).

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 USC §1001, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

7-7-99

Date

*Keith R. Leighton*

Signature

8-9-99

Practitioner's Docket No. 6014-2

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Leighton, Keith R

Application No.: 08/918,582

Filed: 08/19/1997

Group No.: 2876

Examiner: Sherr, D.

For: Hot Lamination Process for the Manufacture Combination Contact/Contactless Smart Card and Product Resulting Therefrom

Batch No. R59

U.S. Patent and Trademark Office  
Office of Publications  
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Crystal Plaza 2 Room-6C30  
Washington, D.C. 20231

LETTER ACCOMPANYING AMENDMENT AFTER ALLOWANCE  
(37 C.F.R. § 1.312)

1. Please make the amendments shown in the attached papers in this application in the specification.
2. Type of amendment:

Correction of formal matters

As shown in the remarks of the attached paper, these (1) are needed for proper disclosure or protection of the invention and (2) require no substantial amount of additional work on the part of the PTO.

3. The issue fee has not been paid.
4. Additional fees:

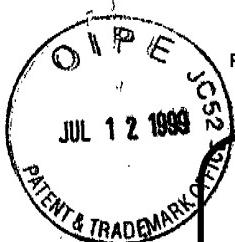
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SIGNATURE OF PRACTITIONER

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Customer No.: 021324

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1225 W. Market St.  
Akron, OH 44313 USA

Plus 2 Attached Pages

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## TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

2

Application Number	08/918,582
Filing Date	August 19, 1997
First Named Inventor	Keith R. Leighton
Group Art Unit	2876
Examiner Name	SHERR, D.

Attorney Docket Number

6014-2

## ENCLOSURES (check all that apply)

<input type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Assignment Papers (for an Application)	<input type="checkbox"/> After Allowance Communication to Group
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment / Response	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition Routing Slip (PTO/SB/69) and Accompanying Petition	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address	<input checked="" type="checkbox"/> Additional Enclosure(s) (please identify below):
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Terminal Disclaimer	<input type="checkbox"/> Supplemental Declaration Return Card
<input type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> Small Entity Statement	
<input type="checkbox"/> Certified Copy of Priority Document(s)	<input type="checkbox"/> Request for Refund	
<input type="checkbox"/> Response to Missing Parts/ Incomplete Application		
<input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53		

Remarks

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JUL 13 1999

## SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Mark A. Watkins
Signature	
Date	July 8, 1999

## CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on this date: 07/08/1999

Typed or printed name

Mark A. Watkins

Signature

Date

JUL 8, 1999

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#10/C JWW

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Keith Leighton      Examiner: Sherr, D.  
Serial No. 08/918,582      Art Unit: 2876  
Filed: 8/19/97      Date: May 19, 1999

Title: HOT LAMINATION PROCESS FOR THE MANUFACTURE COMBINATION  
CONTACT/CONTACTLESS SMART CARD AND PRODUCT RESULTING  
THEREFROM

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**SECOND AMENDMENT AFTER ALLOWANCE UNDER 37 C.F.R. 312(a)**

Dear Sir:

The following second amendment is offered for entry after receipt of the Notice of Allowance mailed April 12, 1999, and before payment of the issue fee. A first amendment under 37 C.F.R. 312 was mailed May 14, 1999.

**In the Specification:**

Please change delete "35" and replace with --37-- at the following points in the specification:  
~~page 10, line 9;~~  
~~page 10, line 11;~~  
~~page 10, line 13;~~  
~~page 11, line 1; and~~  
~~page 11, line 21.~~

**Remarks**

Applicant has made the proposed amendments to the specification because of a redundancy in the labeling of the drawings in the application. Figures 5 and 5a show two different items labelled as 35; applicant notes that the reference to 35 in Figure 5 will be changed

to 37 upon submission of the formal drawings. The amendments to the specification reflect the change to Figure 5.

**Conclusion**

Applicant earnestly requests that the Examiner enter the proposed amendment after allowance inasmuch as the proposed changes do not impact the patentability of the invention, but merely corrects an inconsistency in the labeling of the drawings.

Respectfully submitted,

OLDHAM & OLDHAM CO., L.P.A.



Mark A. Watkins  
Registration 33,813

Date: 5/20/99

MAW/JDD/srm

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Akron, OH 44313-7188  
(330) 864-5550

Attorney Docket: 6014-2